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**PHOTOGRAPHIC
INTERPRETATION
REPORT**

**NATIONAL PHOTOGRAPHIC
INTERPRETATION CENTER**

**COMMUNICATIONS AND RADAR
FACILITIES ASSOCIATED WITH
SEMIPALATINSK AIR DEFENSE ZONE
HEADQUARTERS, USSR**

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AUGUST 1972

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|---|-------------------------------------|--|------------------------|---------------------|------------------------|--|
| INSTALLATION OR ACTIVITY NAME Communications and Radar Facilities Associated with Semipalatinsk Air Defense Zone Headquarters | | | | | COUNTRY UR | |
| UTM COORDINATES NA | GEOGRAPHIC COORDINATES See below | | BE NUMBER See below | COMIREX NO. None | NIETB NO. See below | |

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MAP REFERENCE

ACIC Chart, Series 200, Sheet 0239-11, scale 1:200,000

| | |
|-----------------------------------|--|
| NEGATION DATE (if required) NA | |
| NIC PROJECT 251587 | |

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| Name | Coordinates |
|---|-------------------------|
| Semipalatinsk HF Communi- cations Facility | 50-21-35N 080-12-10E |
| Semipalatinsk Airfield Radio Communications Station | 50-21-45N 080-13-50E |
| Semipalatinsk Airfield Radio Communications Station East | 50-21-55N 080-14-25E |

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ABSTRACT

1. This report describes three communications facilities at Semipalatinsk Airfield [] that appear to be associated with Semipalatinsk Air Defense Zone Headquarters []. The air warning radar facilities and electronics facilities associated with the airfield are also discussed. The report includes basic descriptions, annotated photographs, and mensuration of significant structures.

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INTRODUCTION

2. The communications facilities that appear to be associated with Semipalatinsk Air Defense Zone Headquarters are approximately 2.7 nautical miles (nm) south of the city of Semipalatinsk at Semipalatinsk Airfield (Figure 1).

3. Semipalatinsk HF Communications Facility was first reported from KEYHOLE photography of April 1968. Semipalatinsk Airfield Radio Communications Station and Semipalatinsk Airfield Radio Communications Station East are newly reported. Photography used for the analysis of these facilities is []

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BASIC DESCRIPTION**Semipalatinsk HF Communications Facility**

5. This station, approximately 1.3 nm northwest of the center of the airfield runway, consists of nine horizontal dipole antennas arranged in a semicircle, one FORK REST antenna, a control building, and a support building (Figure 2). It is secured by a single fence. A service road extends from the airfield.

Semipalatinsk Airfield Radio Communications Station

6. This station, approximately 0.7 nm north of the center of the runway, consists of four horizontal dipole antennas, a FORK REST antenna, a single R-400 microwave dish mounted on a

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[redacted] mast, a control building, and a support building (Figure 3). The R-400 dish is oriented approximately east. The station is adjacent to an airfield service road and does not appear to be fenced. Possible cable scars appear to link this facility with Semipalatinsk HF Communications Facility and with a former air warning radar site.

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Semipalatinsk Airfield Communications Station East

7. This fence-secured station, approximately 0.8 nm north-northeast of the center of the runway, consists of four horizontal dipole antennas, one cophasal horizontal dipole antenna, one quadrant antenna, and a control building (Figure 4).

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Air Warning Radar Facilities Associated With Semipalatinsk Airfield

8. Semipalatinsk Airfield Air Warning Radar TALL KING [redacted] at 50-19-00N 080-11-00E is approximately 3 nm southwest of the center of the runway. The site is fenced and consists of one TALL KING radar, a TALL KING control building, a support building, and a probable SQUAT EYE radar.

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9. Semipalatinsk Air Warning Radar Facility Southeast [redacted] at 50-21-15N 080-26-40E is approximately 7.8 nm east of the center of the runway. It consists of the following radars: two BACK NET, two SIDE NET, one BAR LOCK, and one probable ROCK CAKE or STONE CAKE. The only coverage of this facility [redacted] and weather and scale limitations of this imagery precluded further interpretation of the equipment. This equipment was apparently moved from a former AW radar site adjacent to Semipalatinsk Air Defense Zone Headquarters. The former site is abandoned and all equipment has been removed.

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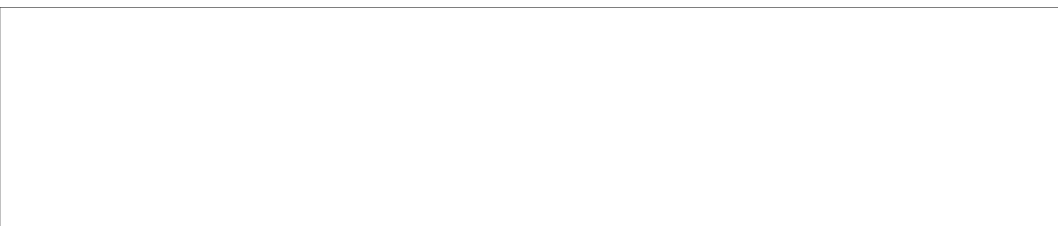
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Miscellaneous Airfield Electronics

10. A radio communications station probably associated with airfield operations is adjacent to the air terminal at 50-21-40N 080-14-25E. It consists of two horizontal dipoles, one oriented approximately 5 degrees with a probable frequency range of 5.0-12.5 MHz and the other oriented approximately 115 degrees with a range of 3.75-9.38 MHz. An adjacent operations building appears to serve as the control building.

11. An airfield-related radar facility is approximately 0.3 nm northwest of the center of the runway at 50-21-21N 080-13-45E. It is fence secured and consists of two BAR LOCK radars on mounds, a third BAR LOCK radar adjacent to the site (possibly a spare), eight vanlike sheds, and a probable control building between the mounds.

REFERENCES



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MAPS OR CHARTS

ACIC Chart, Series 200, Sheet 0239-11, scale 1:200,000

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RELATED DOCUMENTS

USSR. Committee of Standards, Measurements, and Instruments, The USSR Council of Ministers, GOST 8025-67, *Transmitting Shortwave Wideband Balanced Antennas (Counterfeed)*, Moscow 1967 (UNCLASSIFIED)

RCA Service Company, Contract F 33657-69-C-0010, *Soviet Antennas, A Contribution to the DIA Communications Equipment Handbook*, 31 Dec 68 (SECRET) [redacted]

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REQUIREMENT

[redacted]
NPIC/IEG/WGD/SSB Project 251587

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